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Gendered pathways: exploring occupational attainment, leadership perception and gender norms in Romania

Georgiana-Dumitriţa Dănilă[1]

College of Political, Administrative and Communication Sciences, Cluj-Napoca, Romania

Abstract: Women are less likely than men to pursue math-related careers due to lower confidence and less value placed on these fields. Additionally, a significant factor in forming these differences is gendered socialization practices at home, in schools, and among peers (J. Eccles, 2011). This paper explores the differences between the opinions of Romanians regarding who should have a certain type of occupation, between current occupations and what would be potential factors that can explain this difference, considering that in today's labor markets, occupational segregation is still prevalent. Examining data from the Romanian Gender Barometer through Structural Equation Modeling we find that higher education levels lead to more progressive attitudes towards gender equality, highlighting education's role in challenging traditional gender norms. It also reveals that those who hold traditional masculine views tend to doubt women's leadership abilities, emphasizing the need to break down gender stereotypes. The analysis shows that factors like education, gender, marital status, and medium of residency (rural/urban) significantly impact views on gender roles and women's leadership.

Key-words: gender-based stereotypes; occupational attainment; role congruity theory, gender equality, glass ceiling effect

1. Introduction

From the 1960s onward, research on women's professional development received a lot of attention, especially in the US. Farmer (2006, 1–44) emphasizes how this was a crucial time, influenced by the emerging feminist movement, historic laws, and growing opportunities. These occasions not only advanced the conversation about gender equality but also provided the groundwork for continued study and initiatives targeted at resolving gender gaps in the workforce. The topic is still relevant to these days, because when we are looking back in the 1980s

[1] Corresponding author e-mail: georgianadanila26@gmail.com

or 1990s (Blair and Banaji 1996; Connell 1987; J. S. Eccles 1987; Melamed 1995), for instance, we can see articles talking about current problems. The traditional gender roles, stereotypes, and cultural patriarchy dominant in Romanian post-communist society are important factors ensuring the perpetuation of male dominance (Gheaus 2007, 243–46). Stereotypes that support male dominance and ingrained traditional gender norms are the root cause of cultural prejudices in Romania against women in positions of political leadership. The "erosion" of this stereotype among women is primarily associated with higher education, the presence of older children in the household, and a feminist attitude. Only men with a tertiary education seem to be less likely to agree to this belief. In addition, men who like reading as a hobby are less inclined to support stereotypes of male leadership supremacy (Băluţă and Vlase 2023, 648–63).

According to the global report (World Economic Forum 2023), carried out every year, regarding the gender gap, Romania registered an increase compared to 2022 (90th), but returned to the same rank from 2021 (88th). Up until 2024, there had been a steady increase in gender parity in political empowerment during the previous ten years; at present, it sits at 39.1%. The subindex shows, though, that Iceland, Norway, and Finland have the best overall scores, while Romania, Cyprus, and Hungary are at the bottom of the list. Although there was a minor improvement in educational attainment from 2022 to 2023 (from 39th to 36th position), there was a reduction in educational options, participation, and opportunity measures from 63rd to 72nd place. These shifts highlight how constantly changing sociocultural elements are influencing gender equality in Romania as a whole.

Exploring gendered pathways in educational and occupational attainment is still important, especially when considering Romania, where societal expectations and lasting gender differences influence people's professional decisions (Constantinescu 2019). Understanding these factors is important in order to overcome the obstacles to gender parity in the labor force and academic system, increase inclusiveness, and advance possibilities for every person to follow their aspirations in their careers, no matter their gender. Examining these paths can offer important insights into the particular difficulties Romanian women and men experience in reaching gender parity and pursuing their career goals, since traditional gender norms frequently cross with social and economic variables in the country. Even though the number of working women is increasing, women continue to work in female-dominated occupations and at the bottom of the professional hierarchy despite efforts to reduce bias: "since 1970 approximately 4 million women have entered the work force; 3.3 millions of these have taken jobs as secretaries, nurses, bookkeepers, cashiers, and other female-dominated, supportive occupations" (J. S. Eccles 1987, 135). Thus, research in this field can shed light on these problems and help shape actions and legislative changes that support gender parity.

When it comes to career, women often face barriers, starting from aspirations, to choosing a job and development. Betz (2008, 717–52) identified six major barriers, including mathematics (considering the STEM field), low self-efficacy in non-traditional career fields, occupational and gender stereotypes, limited career options, concerns about multiple roles, and barriers in the educational system. These barriers can be translated through a not very well-known concept, such as the glass ceiling effect. The glass ceiling prevents women from advancing in their careers by making it more difficult for them to hold top positions and by creating growing barriers to their promotion. Gender preconceptions, performance demands, and isolation are just a few of the obstacles that women face (Leung and Cinamon 2020). Another invisible barrier for many is the work-family connection, so we can talk not only about occupational segregation, but also

household segregation. The Social Cognitive Career Theory (SCCT) is an interesting paradigm for understanding how women, especially in STEM disciplines, construct their careers. Lent, Brown, and Hackett invented it in 1994, then in 2002 they made more improvements. The theory is based on self-efficacy and outcome expectations, which operate as a mediating element between the impact of contextual and personal factors on academic and professional decisions (Lent et al. 1994, 79–122).

The large gender discrepancy in the labor market in other countries raises questions about the underlying cultural stereotypes regarding the population's beliefs in men's and women's educational and occupational abilities, an issue that our paper seeks to answer (Hassani 2021; Hentschel, Heilman, and Peus 2019; Leung and Cinamon 2020). Grünberg (2018) uses the Romanian Gender Barometer (2018/2019) to demonstrate that although conditions have somewhat improved over time, a significant percentage of the population (44.2%) still supports this stereotype in Romania today. In order to understand why this cultural idea persists, this study documents its gendered structure and identifies the factors that are linked to men's and women's tendency to agree with this biased opinion about men's aptitude for political leadership. Gender stereotypes are descriptive, for example the expectation that women are not suitable as leaders, but also prescriptive, indicating how women or men "should" or "should not" behave. Both combined lead to gender bias in work settings and the deviation from the expected behaviors, particularly in traditionally male-dominated fields, can lead to disapproval and negative reaction. Competent women often face personal derogation, being labeled as cold, selfish, and bitter, despite their success (Heilman 2001, 667).

Possible explanations for some of the nuances of the societal prejudice against women in leadership roles may be explained by the fact that men and women candidates are given distinct sets of skills: "achieving leadership is more difficult for women than men, because of the common perception that women have less leadership ability and (often) the preference that women not exhibit this ability and instead engage in communal, supportive behavior" (Eagly and Karau 2002, 581). People's stereotyped perceptions of social roles are explained, among others, by the role congruity theory, which was introduced by Eagly and Karau(2002). Role congruity theory posits that group members are judged based on the social roles they play within the group and must act accordingly. An interesting fact is that even when women intentionally reject norms, there is a subconscious influence named implicit stereotyping. This term has different outcomes on motivation and performance than explicit stereotypes (Kiefer and Sekaquaptewa 2007).

Interestingly, Falter and Wendelspiess Chávez Juárez (2012) attempts to explain job segregation based on gender traits that are assessed through behavioral indicators, and an index is created. The results show that girls who exhibit a high degree of masculinity are around 11% to 13% more likely to aspire to vocations in which men predominate. A critical view would argue that the paper may perpetuate stereotypes, but maybe due to them and the pressure on girls to have that "masculine traits" we have this possible explanation for the biased idea and hence results. Masculinity and femininity are concepts that refer to stereotypical traits assigned by society and integrated in every sphere of life, in the family, education and then at work. Masculine traits are what build the image of a "strong, technically competent, ambitious, self-sufficient and authoritative leader who can maintain control of his emotions" (Drydakis et al. 2017; Hofstede 2001; Connell 1987). Femininity is the opposite pole, containing traits such as "empathy, sensitivity, loyalty and a caring disposition" (Drydakis et al. 2017; Heilman 2012). When these traits assigned to gender are violated, a backlash effect is born (Rudman and Kilianski 2000; Blair

and Banaji 1996): “failing to “soften” female agency—to explicitly counteract it by projecting an image that is both nice and able—results in backlash’’, hindering women's economic parity and equality (Rudman and Glick 2001, 759). It is interesting to note that although success is seen by many scholars as representing "masculine" traits such as "tough-minded, independent, and self-controlled" (Drydakis et al. 2017; Bartram 1992; Barton and Cattell 1972), the idea of career success itself was not clearly gendered (Melamed 1995).

While Falter and Wendelspiess Chávez Juárez (2012) focus on behavioral indicators and gender traits to explain job segregation, Correll (2004, 93–113) offers a different perspective on the influence of cultural beliefs on career aspirations. Participants exposed to beliefs suggesting gender-based differences in task ability exhibited corresponding differences in self-assessments of competence and aspirations for career-relevant activities. Notably, male participants in the condition where men were perceived as superior in the task reported higher assessments of task ability and greater aspirations for related career paths compared to female participants. He applies the same supply-side theory, but with a better approach and through an experiment.

When we discuss gendered pathways in the labor market, most of the papers follow career aspiration, something that can be measured from childhood/adolescence. In a study examining the disparities in career aspirations between male and female teenagers, Al-Bahrani et al (2020, 703–11) discovered that, on average, female adolescents scored higher than male adolescents. This study emphasizes how parents' educational attainment and grade point average affect their children's career goals, highlighting the need of taking these characteristics into account when designing interventions. Stoet and Geary (2022) analysis, which was based on information from the 2018 PISA, showed that females were more likely to want jobs focused on people than boys were on things, such as STEM fields. It's interesting to note that in nations where women have higher levels of empowerment, these gender disparities were more noticeable. The authors highlighted the *gender equality paradox* seen in more developed countries by arguing that wealth makes it possible for more students to choose careers they are genuinely interested in. Nonetheless, when individuals believe that males are more competent at tasks like math, both men and women unconsciously expect better performances from men (Correll 2001).

Quite a few, however, do not follow the situation longitudinally. For those who do, gendered paths in the job market offer important insights into long-term effects and stages of development. For example, He and Zhou (2018) examined how study fields affect early career achievement and discovered that although the field of study explains some of the occupational gender differences, it does not fully explain women's disadvantages in obtaining managerial positions. Their creative method further illustrated how gender role expectations could be balanced to reduce women's disadvantages in particular areas. Their research has an important role in the present work, along with the article of Ionela Vlase and Ionela Băluță (2023), by the fact that similar variables are found in the first and the same database in the second. The impact of traditional gender role beliefs (TGRB) on educational and occupational achievement in STEM occupations is examined by Dicke et al (2019). The study reveals the negative impact of TGRB on females' educational attainment and interest in STEM-related careers by looking at longitudinal data. These results highlight how important it is to address gender role attitudes in order to advance gender parity in STEM professions and other fields.

Based on Eccles et al. (2011) model of achievement-related choices, four key factors can offer insights about gender disparities in educational and career choices. First, choice plays a crucial role in behavior, “even if these choices are heavily influenced by socialization pressures and

cultural norms" (J. Eccles 2011, 196). Second, people base their decisions on perceived accessible possibilities influenced again by the same factors. Third, decisions about career and work-family balance are made for the present and future. Finally, people's decisions and actions evolve over time and across different contexts.

2. Research Design and Methodology

This study utilizes the nationally representative dataset of the Romanian Gender Barometer (2018/2019) to examine the influence of gender norms on educational and career attainment in Romania. The objective is to identify potential factors that can explain occupational segregation and to provide insights that can inform policies to promote gender equality in education and the workforce. Due to personal interest in gender studies, I seek to explain what can potentially trigger traditional beliefs and how those beliefs can or cannot influence attitudes towards gender equality and women leaderships skills.

The dataset from the Romanian Gender Barometer (2018/2019) includes variables that capture demographic information, perceptions of gender roles, educational attainment, occupational status, and attitudes towards gender equality. The analysis will primarily involve Structural Equation Modeling (SEM) using Amos to identify significant correlations and patterns within the dataset. SEM is chosen because it allows for the simultaneous analysis of multiple variables and their relationships, providing a comprehensive understanding of the impact of gender norms on educational and career outcomes. It is important to take into consideration that this is a correlational study and causal relationships are not tested. Still, we view these correlational relations as important for understanding the context in which gender plays a role.

By creating latent variables such as "Traditional Gender Roles Beliefs", "Women Leadership Skills", "Gender Roles-Masculinity" and "Attitudes Towards Gender Equality," the study can capture the underlying constructs that influence occupational attainment and educational choices. The analysis will also involve statistical techniques, such as descriptives from SPSS database and correlations to identify patterns within the dataset. The models will explore how these latent variables interact with demographic information, educational attainment to identify key factors contributing to occupational segregation in Romania. Exploring those variables will help us to understand whether we can talk about occupational segregation in Romania and why.

For the latent variables, we used GRM, a construct that measures traditional views on gender roles, particularly emphasizing masculinity. Indicators include statements like "Femeia trebuie sa-si urmeze barbatul"(A woman must follow her man), "Barbatul este capul familiei" (The man is the head of the family), and others related to traditional gender roles. WLS captures perceptions of women's leadership abilities/skills. Indicators include statements like "Femeile sunt mai putin unite decat barbatii"(Women are less united than men) and "Femeile nu au incredere in fortele lor"(Women lack confidence in their abilities). ATGE construct measures general attitudes towards gender equality and a feminist agenda. Indicators include statements like "In ultimii ani, s-a discutat prea mult despre modul in care sunt tratate femeile in Romania"(In recent years, there has been too much discussion about how women are treated in Romania) for the feminist agenda or "Ce isi doresc cu adevarat femeile este sa aiba familie si copii, nu slujba(What women really want is to have children and a family, not a job) for general attitudes towards gender equality.

For the correlation part of the study, several variables have been constructed to explain in a general way what some can explain specifically. "Family related stereotypical gender norms"

include variables related to traditional gender norms in the family context. Examples are: “Femeia trebuie sa-si urmeze barbatul”, “Barbatul este capul familiei”. Those variables focuses on how masculinity as a concept is an ingrained stereotype about men being the protectors and providers. “Work related stereotypical gender norms” was built from 6 variables (LEAD1_1 to LEAD 1_6) that capture attitudes related to women's leadership abilities, in relation to the view that "Men are more capable of leading than women". Examples are: "Women do not trust their strengths", "Women are afraid of big responsibilities". Cronbach’s Alpha is .747, so we have good reliability. For the constructed variable “attitudes towards gender equality” was used 5 variables related to feminist agenda. Examples are: “In recent years, there has been too much discussion about the way women are treated in Romania”, “Promoting equal opportunities at work benefits women”. Cronbach’s Alpha is .625, so we have acceptable reliability.
The research question the paper seeks an answer is “How do gender roles, societal expectations, and demographic factors influence perceptions of women's leadership skills and attitudes towards gender equality in Romania?”

3. Research Results

According to the data of the Gender Barometer (2018/2019) there is a significant difference in employment patterns between men and women, reflecting traditional gender roles and societal expectations. The descriptive statistics highlight the gender disparities in occupational status in Romania.
A higher percentage of men (8.2%) than women (3.3%) are engaged in entrepreneurial activities or work as private practitioners or agriculturists. This disparity suggests that men are more likely to be involved in independent and potentially higher-risk occupations, whereas women might face more barriers to entering these fields, thus being able to refer to the constraining effect of cultural beliefs about gender on the career aspirations of men and women (Correll 2004). Men are more likely to be salaried employees (49.8%) compared to women (38.2%). This discrepancy points to a higher participation of men in formal employment sectors, which could be attributed to various factors including gender biases in hiring practices, career advancement opportunities, and societal expectations (He and Zhou 2018; Heilman 2001; Leung and Cinamon 2020).
A significantly higher percentage of women (51.3%) than men (34.9%) are not working at all. This contrast reflects the traditional gender roles that expect women to take on more domestic responsibilities, limiting their participation in the labor market. The percentage of temporarily not working individuals is similar between men (7.1%) and women (7.2%), indicating that temporary unemployment affects both genders almost equally.

Table 1

Occupation

Sex	Occupation	Frequency	Percent
Male	Private entrepreneur (owner, self-employed, farmer)	45	8.2
	Employee	276	49.8
	Temporarily not working	39	7.1
	Not working	193	34.9
	Total	555	100.0
Female	Private entrepreneur (owner, self-employed, farmer)	19	3.3
	Employee	222	38.2
	Temporarily not working	42	7.2
	Not working	298	51.3
	Total	582	100.0

Going a little deeper, detailed descriptives on occupation shows that compared to 8.8% (49 out of 555) of male respondents, a significant 21.3% (124 out of 582) of female respondents identified as housewives. The obvious disparity highlights the widespread gender norm that women should put their work second to their home duties: “even for women who are in paid employment, and even if they earn more than their spouses, they still do more housework than men”(Leung and Cinamon 2020, 276; Horne et al. 2018).
Furthermore, 11 out of 582 female respondents, or 1.8% of the total, are on maternity leave; male respondents do not fall into this category. This is in line with the social norm that places a greater burden on women to raise children and take care of other family members, which hinders women's ability to grow in their careers. At the same time, the extremely low percentage of women in managerial roles compared to men highlights the glass ceiling effect (Heilman 2001; Leung and Cinamon 2020), where women face invisible barriers to advancing to higher positions despite having the necessary qualifications and experience.

Table 2

Occupation

Sex	Occupation	Frequency	Percent
Male	Business owner/craftsman	16	2.9
	Manager, director (CEO, deputy)	6	1.0
	Head of department	11	1.9
	Specialist, staff with higher education (lawyer, doctor, accountant)	56	10.1
	Homemaker	49	8.8
Female	Business owner/craftsman	11	1.9
	Manager, director (CEO, deputy)	1	0.2
	Head of department	8	1.3
	Specialist, staff with higher education (lawyer, doctor, accountant)	37	6.4
	Homemaker	124	21.3
	Sick/maternity leave	11	1.8

Because occupational attainment is closely related to stereotypes and the need to conform, the data show us how although we observe a significant percentage of people who do not find gender important when it comes to career, we can see important numbers that lead us to the idea that we still have problems assigning masculine and feminine jobs. The data is segmented by the

respondents' gender and their opinions on who should work in specific fields: IT (informatics, programming, computers), education, and construction.

Among male respondents, 28.1% believe that mainly men should work in IT, 4.5% believe mainly women should work in IT, and a significant majority of 67.4% think it doesn't matter whether men or women work in IT. Among female respondents, 19.3% believe that mainly men should work in IT, 6.3% believe mainly women should work in IT, and 74.4% think gender doesn't matter.

Among male respondents, 4.3% believe that mainly men should work in education, 30.5% believe mainly women should work in education, and 65.2% think it doesn't matter who work in education. Among female respondents, 1.7% believe that mainly men should work in education, 26.8% believe mainly women should work in education, and 72.9% think it doesn't matter.

A striking 87.1% male respondents believe that mainly men should work in construction, 1.0% believe mainly women should work in construction, and 11.9% think it doesn't matter whether men or women work in construction. Among female respondents, 82.0% believe that mainly men should work in construction, 2.2% believe mainly women should work in construction, and 15.8% think gender is not an important factor.

These descriptive statistics highlight deeply ingrained gender norms and cultural expectations for roles in the workforce in Romania. The data indicates that a significant proportion of respondents—male and female—have traditional views about gender-specific responsibilities in certain fields, particularly IT and construction.

The majority of respondents, irrespective of gender, believe that gender does not matter for working in those fields. However, there is still a notable percentage of respondents who hold gender-specific views, with more men than women believing that men should predominantly work in IT. This reflects an ongoing perception of IT as a male-dominated field, which could influence both the occupational attainment and educational choices of women. There is a common belief, especially among men, that women should primarily work in education. This reflects traditional gender roles that associate women with nurturing and teaching professions (J. S. Eccles 1987). These views could impact career aspirations and educational paths, reinforcing gendered occupational segregation. A substantial majority of both male and female respondents believe that men should predominantly work in construction. This strong gender bias supports the idea that construction is a physically demanding sector best suitable for men. The gender gap in the construction industry may persist as a result of women being discouraged from pursuing jobs in this field by social expectations.

Because gender stereotypes persist both in the family sphere and in the work sphere, as we can see in the example of the IT field, construction and that of education in the Gender Barometer, there is a need for solutions aimed not only at education, but especially at gender equality in STEM fields for example, because choosing STEM in education may challange the stereotypes for girls and we may see less and less people thinking IT is a male dominant field.

Table 3

In IT (informatics, programming, computers) should work ...

Sex		Frequency	Percent
Male	Especially men	155	28.1
	Especially women	25	4.5
	Doesn't matter	371	67.4
Female	Especially men	111	19.3
	Especially women	36	6.3
	Doesn't matter	427	74.4

In education/teaching should work...

Sex		Frequency	Percent
Male	Especially men	24	4.3
	Especially women	170	30.5
	Doesn't matter	362	65.2
Female	Especially men	10	1.7
	Especially women	148	25.4
	Doesn't matter	425	72.9

Table 4

In construction should work...

Sex		Frequency	Percent
Male	Especially men	484	87.1
	Especially women	6	1.0
	Doesn't matter	66	11.9
Female	Especially men	479	82.0
	Especially women	13	2.3
	Doesn't matter	91	15.5

Looking further into the problem of occupational segregation, we notice differences not only related to the glass ceiling effect or gender stereotypes, but also related to leadership. A considerable percentage of male respondents (23.2%) prefer a male director, compared to 16.4% who prefer a female director. The majority (59.9%) express no preference. This suggests a gender bias among men towards male leadership in the higher-stakes role of school director. Among female respondents, 16.6% prefer a male director, while 23% prefer a female director. The majority (60.5%) express no preference, indicating a more balanced view but with a notable preference for female leadership in the role of school director among women.

A significant part of male respondents (16.5%) prefer a male president of the parent committee, while a larger proportion (23.9%) prefer a female president, and the majority (57.5%) express no preference. This indicates a relatively balanced view among men, with a slight inclination towards preferring women in leadership roles within the parent committee. Among female respondents, a smaller proportion (12.8%) prefer a male president, while a notable 28.4% prefer a female president. The majority (57.3%) indicate no preference, reflecting a strong support for female leadership in this role among women, but also a biased view based on the difference between the

roles, one being the president of the parent committee, a slightly less important role than the one of the school director.

Here we can talk about implications for gender equality in educational leadership, with focus on male bias in leadership, the data revealing a noticeable gender bias among male respondents favoring men for the role of school director, while showing more openness towards female leadership in the role of president of the parent committee. This suggests that men may perceive higher administrative roles as more suitable for men, reflecting traditional gender stereotypes, as studies have shown us (Rudman and Glick 2001). Women on the other side show a clear preference for female leadership in both roles, highlighting a desire for greater female representation and possibly a recognition of the capabilities and contributions of women in leadership positions.

Table 5

Would you choose a man or a woman for the position of president of the parents' committee at the school?

Sex		Frequency	Percent
Male	Man	92	16.5
	Woman	133	23.9
	Doesn't matter	320	57.5
Female	Man	75	12.8
	Woman	166	28.4
	Doesn't matter	334	57.3

Would you choose a man or a woman for the position of school director?

Sex		Frequency	Percent
Male	Man	129	23.2
	Woman	91	16.4
	Doesn't matter	333	59.9
Female	Man	97	16.6
	Woman	134	22.9
	Doesn't matter	353	60.5

The next table presents Pearson correlation coefficients between various variables including family-related gender norms, work-related gender norms, attitudes towards gender equality, education level, medium of residency, and occupation.

Firstly, family-related gender norms are moderately positively correlated with work-related gender norms (r = .198), indicating that individuals who hold traditional gender norms in family settings are likely to hold similar norms in work settings. There is also a weak positive correlation between family-related gender norms and attitudes towards gender equality (r = .125), suggesting that those with traditional family-related gender norms may have similar views on attitudes

towards gender equality, thinking that discrimination between sexes is not a problem in Romania. Education level shows a moderate positive correlation with family-related gender norms (r = .199), indicating that higher education levels can challange traditional family-related gender norms. Medium of residency is also moderately positively correlated with family-related gender norms (r = .167), suggesting that those living in certain areas, possibly rural, are more likely to hold traditional family-related gender norms. Furthermore, there is a moderate negative correlation between family-related gender norms and occupation (r = -.208), showing that individuals with traditional family-related gender norms are less likely to be in certain occupations, possibly those requiring higher qualifications or typically held by women.

Work-related gender norms have a strong positive correlation with attitudes towards gender equality (r = .343), indicating that traditional work-related gender norms are strongly associated with attitudes towards gender equality, meaning those thinking that „Women are too busy with household chores and no longer have time for management positions" may also believe that „Promoting equal opportunities at work benefits women". There is no significant correlation between work-related gender norms and education level (r = -.008), medium of residency (r = -.051) or occupation.

Attitudes towards gender equality show a weak negative correlation with education level (r = -.102), suggesting that higher education levels are associated with more progressive attitudes towards gender equality. However, this correlation is weak and indicates that education alone may not be sufficient to significantly change attitudes towards gender equality. There is no significant correlation between attitudes towards gender equality and medium of residency (r = .028) or occupation (r = .045).

Education level has a moderate positive correlation with medium of residency (r = .208), indicating that individuals with higher education levels are more likely to reside in certain areas, possibly urban. There is a strong negative correlation between education level and occupation (r = -.390), showing that some education levels are somehow associated with the choice of certain occupations, an example could be that those with traditional views are less likely to be in occupations requiring higher qualifications or those typically held by women. This highlights the influence of gender norms on occupational attainment. Medium of residency has a weak negative correlation with occupation (r = -.139), indicating that medium of residency has a small effect on occupation, with certain occupations more likely to be associated with specific residency types.

Table 6

Correlations

	family related stereotypical gender norms	work related stereotypical gender norms	attitudes towards gender equality	Education	Residency (rural/urban)	Occupation
family related stereotypical gender norms	1	.198**	.125**	.199**	.167**	-.208**
work related stereotypical gender norms	.198**	1	.343**	-0.008	-0.051	0.000
attitudes towards gender equality	.125**	.343**	1	-.102**	0.028	0.045
Education	.199**	-0.008	-.102**	1	.208**	-.390**
Residency (rural/urban)	.167**	-0.051	0.028	.208**	1	-.139**
Occupation	-.208**	0.000	0.045	-.390**	-.139**	1

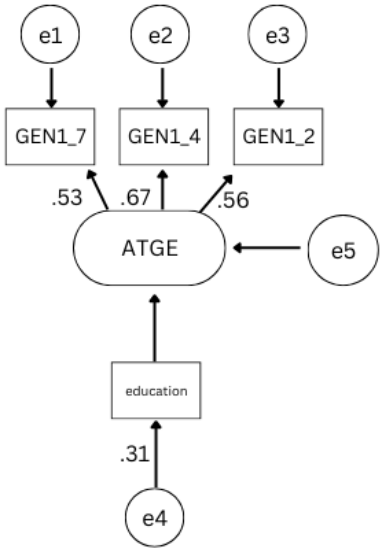
Hypothesis 1: Higher levels of education are associated with more progressive attitudes towards gender equality.

To examine this hypothesis, we analyzed the relationship between educational attainment and attitudes towards gender equality using structural equation modeling (SEM) with AMOS. The attitudes towards gender equality (ATGM) were measured using three indicators related to the general attitudes towards gender equality : "University studies are more important for a boy than for a girl", " What women really want is to have a family and children, not a job", and "Family life suffers when the woman has a full-time job (8 hours)."

The CFI value of .979 suggests a very good fit of the model to the data, as it is close to 1. The RMSEA value of .062 is below the threshold of .08, indicating an acceptable fit. However, the TLI value of .893 is slightly below the preferred threshold of .90, suggesting some room for improvement in the model. The chi-square value is significant (p = .005), which is expected given the sample size and the model itself. The path from educational attainment to attitudes towards gender equality (educ_eu -> ATGE) is significant (p < .001). The standardized regression weight is .31, indicating a moderate positive relationship. The paths from ATGM to the individual indicators are all significant: ATGM -> "University studies are more important for a boy than for a girl" (GEN1_7) standardized estimate is .53; ATGM -> "What women really want is to have a family and children, not a job" (GEN1_4) standardized estimate is .67 and ATGM -> "Family life suffers when the woman has a full-time job (8 hours)" (GEN1_2) standardized estimate is .56.

These results indicate that higher educational attainment is associated with more progressive attitudes towards gender equality, supporting the first hypothesis. Specifically, individuals with higher levels of education are less likely to agree with traditional gender role beliefs, such as prioritizing university studies for boys over girls, viewing women's primary role as family caretakers, and believing that family life suffers when women work full-time. At the same time, it is important to note that gender role beliefs can also predict one's educational and occupational aspirations and choices(Eccles et. al 1983; Schoon and Parsons 2002), being a full-circle situation. In conclusion, the findings from the SEM analysis provide strong support for the hypothesis that

higher levels of education are associated with more progressive attitudes towards gender equality in Romania. This relationship highlights the importance of educational attainment in shaping gender norms and suggests that policies aimed at increasing access to education could have positive effects on gender equality attitudes.



***Model 1**. ATGE (attitudes towards gender equality); GEN1_7 (University studies are more important for a boy than for a girl); GEN1_4 (What women really want is to have a family and children, not a job); GEN1_2 (Family life suffers when the woman has a full-time job (8 hours)*

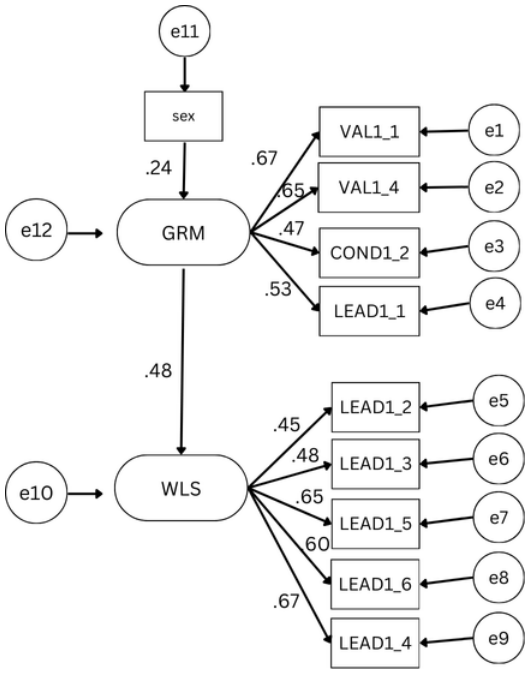
Hypothesis 2: The more traditional gender roles are accepted, the less likely it is that women's leadership skills will be supported.

Each of the variables measuring Gender Roles-Masculinity(GRM) and Women's Leadership Skills(WLS) has significant factor loadings on their respective latent constructs. The model fit indices (TLI=.785, CFI = .867, RMSEA = .076) indicate that while the model does not fit perfectly, it provides a reasonable approximation of the relationships among the constructs.

The significant relationship between sex and Gender Roles-Masculinity (.24) indicates that sex influences the perception and acceptance of conventional masculine gender roles. The significant path from Gender Roles-Masculinity to Women's Leadership Skills (.48) suggests that the more an individual endorses traditional masculine gender roles, the more likely they are to view women as having poorer leadership skills. This is reflected in attitudes such as women being less united, lacking self-confidence, fearing responsibility, avoiding politics due to perceived corruption, and not having time for leadership roles because of their duty in the house. Sex has an indirect effect on perceptions of women's leadership skills through gender roles on masculinity. This implies that sex influences women's leadership skills indirectly by first influencing gender roles on masculinity, which in turn impacts perceptions of women's leadership skills. This finding may imply that women's representations can interfere with the problematically established ideological division between the private and public spheres "as domains of motherhood and political community that have been socially constructed over time as respectively women's and men's attributions"(Băluță and Vlase 2023, 657; Weintraub 1997).

The SEM analysis provides evidence that traditional masculine gender roles significantly impact perceptions of women's leadership skills. This suggests that interventions aiming to improve

perceptions of women's leadership abilities might benefit from addressing and challenging traditional gender role attitudes. The inclusion of sex as a variable helps explain some of the variability in gender roles masculinity, highlighting the complex interactions between these constructs in the context of leadership perceptions. In conclusion, different predictors had various effects on men's and women's attitudes about the stereotype of male political leadership(Băluță and Vlase 2023).



Model 2*. GRM (Gender Roles based on Masculinity); WLS (Women Leadership Skills); VAL1_1 (The woman must follow her man); VAL1_4 (The man is the head of the family); COND1_2 (It is more the duty of men than of women to bring money into the house); LEAD1_1 (Men are more capable of leading than women); LEAD1_2 (Women are less united than men); LEAD1_3 (Women do not trust their own strength); LEAD1_5 (Women are afraid of big responsibilities); LEAD1_6 (Women do not want to get involved in politics because they believe that politics is a corrupt field); LEAD1_4 (Women are too busy with household chores and no longer have time for management positions)*

Hypothesis 3: Gender roles based on masculinity influenced by demographic variables significantly impact women's leadership skills and attitudes towards gender equality.

The ratio of chi-square to degrees of freedom (CMIN/DF) is 4.080, which suggests a moderate fit as values less than 5 are considered acceptable. However, some indices indicate a need for improvement for this model. The Comparative Fit Index (CFI) is .854, which is slightly below the acceptable threshold of .90, and the Tucker-Lewis Index (TLI) is .803, also below the .90 threshold. On the positive side, the Root Mean Square Error of Approximation (RMSEA) is .052, with a 90% confidence interval ranging from .047 to .057, indicating a good fit as values less than .06 are desirable.

For gender roles based on masculinity (GRM), residency has a significant positive effect with a p-value of .000 and a standardized estimate of .17. Education (educ_eu) also significantly influences gender roles masculinity with p-value of .000, leading to a standardized estimate of .36. Marital status shows a non significant negative effect on gender roles masculinity (-.095). The variable sex

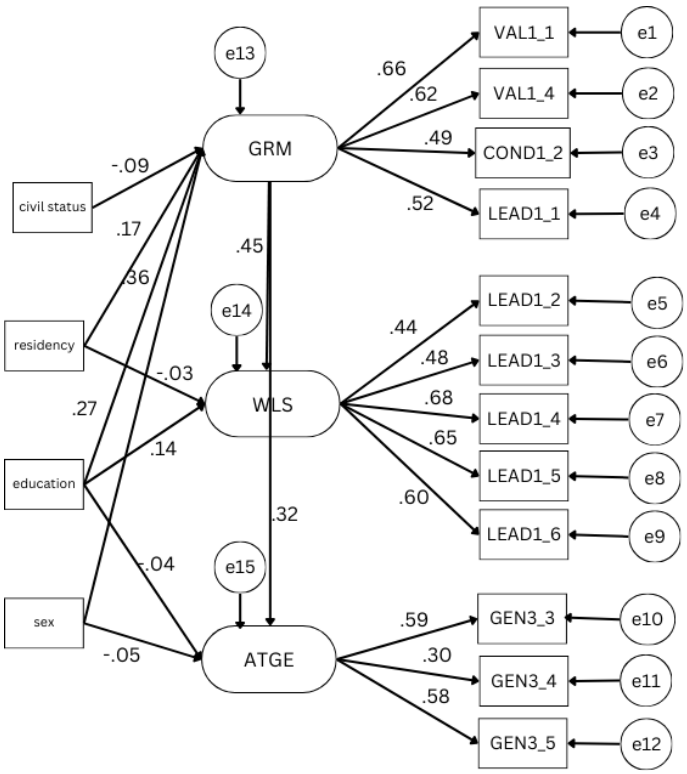
has a significant positive effect on gender roles masculinity, resulting in a standardized estimate of .27.

Regarding women leadership skills (WLS), gender roles related to masculinity significantly positively affects WLS, with an estimate of .359, p-value of .000, and a standardized estimate of .44. Additionally, education (educ_eu) significantly positively affects WLS (.14). Attitudes towards gender equality/feminist agenda (ATGE) are also significantly influenced by gender roles-masculinity, with an estimate of .779 and p-value of .000, resulting in a standardized estimate of .29.

The model indicates that the constructs of gender roles based on masculinity traits, women's leadership skills, and attitudes towards gender equality are influenced by variables such as residency, education, civil status, and sex. The model fit indices suggest a need for improvement, particularly in the CFI and TLI. The relationships among constructs are significant, with gender roles-masculinity playing a central role in influencing both women's leadership skills and attitudes towards gender equality. Education strongly positively influences perceptions of gender roles based on masculinity (.36) and moderately women's leadership skills (.14). Sex positively influences perceptions of gender roles based on masculinity traits(.27).

The relationship between gender roles-masculinity and women's leadership skills (.45) suggests that traditional views on masculinity might influence the perception of women's leadership skills, with those thinking that "men are more capable to lead than women" also think that "women are afraid of big responsibilities". A significant positive relationship exists between gender roles-masculinity and attitudes towards gender equality (.32) and suggests that traditional gender roles might influence overall attitudes towards gender equality, possibly in a way that traditional roles are being re-evaluated in modern contexts, but those believing the stereotypes related to "men being the head of the family" are also those that do not recognize the discrimination between sexes as a problem in Romania.

The model suggests that traditional views on gender roles, specifically "masculinity", are significantly influenced by residency, education, civil status, and sex. These traditional views, in turn, significantly impact perceptions of women's leadership skills and attitudes towards gender equality (feminist agenda). The positive influence of education on both gender roles-masculinity and women's leadership skills highlights the importance of education in shaping modern views on gender roles and leadership. Civil status is not a significant factor. The results draw attention to the complex interaction that exists between sociodemographic characteristics and gender views. Men may not adequately represent women's interests and concerns, thus those who disagree with the concepts that "men are more capable to lead than women" or "women are afraid of big responsibilities" may view the progress made in the area of gender equality as inadequate. As a result, they are less likely to think that men make better political leaders(Băluță and Vlase 2023). Further refinement of the model might be necessary to achieve better fit indices.



***Model 3**. See Model 1 and 2 for references already used; GEN3_3 (In recent years, there has been too much discussion about the way women are treated in Romania); GEN3_4 (Currently, discrimination against women is not a problem in Romania); GEN3_5 (Promoting equal opportunities at work benefits women)*

4. Discussion

The results of this study provide insight into the complicated relationships that exist in Romania between gender roles, educational and occupational attainment, perceptions of women's leadership skills, and attitudes towards gender equality. Through the analysis of data from the Romanian Gender Barometer (2018/2019) using Structural Equation Modeling (SEM), several key insights have emerged, offering valuable implications for policy and societal interventions aimed at promoting gender equality in education and the workforce. For example, boys and girls, later men and women, are likely to form different self-perceptions, expectations for success, and evaluations of educational and career options if they receive different feedback, advice, and information about school subjects, career opportunities, and skill development from parents, teachers, and peers (J. Eccles 2011, 195–201). In the same way, people's impressions of their own abilities and preferences can be influenced by their exposure to a variety of educational and professional experiences within their surroundings. At the same time, women may consider more possibilities of work options when policies that support families and treat women equitably exist. Firstly, the results support the hypothesis that higher levels of education are associated with more progressive attitudes towards gender equality. This is consistent with previous studies highlighting the positive effects of education in challenging conventional gender norms and promoting gender equality(Wang and Degol 2013, 304–40). Individuals with higher educational attainment are less likely to adhere to traditional gender role beliefs, such as prioritizing boys' education over girls' and viewing women primarily as family caretakers. This illustrates the need for policies that improve equity and equality in education, particularly for vulnerable groups.

Secondly, the study reveals a significant relationship between perceptions of gender roles based on masculinity and attitudes towards women's leadership skills. Those endorsing traditional masculine gender roles are more likely to perceive women as lacking in leadership abilities. This result emphasizes how widespread gender stereotypes are in shaping people's opinions about women's abilities and fit for leadership positions. Creating inclusive and diverse leadership cultures where people are judged on their abilities rather than gender stereotypes requires interventions targeted at challenging and demolishing these preconceptions.

Moreover, the analysis demonstrates the complex interplay between demographic factors and gender role perceptions. Variables such as education level, sex, civil status, and medium of residency significantly influence attitudes towards gender roles, women's leadership skills, and attitudes towards gender equality. Education emerges as a particularly influential factor, positively impacting perceptions of gender roles based on masculinity and women's leadership skills. The study additionally points out the necessity of using strategies to address gender disparity in Romania. Although there has been progress in questioning conventional gender standards, especially among those with higher levels of education, differences still exist among other demographic groups.

In conclusion, the findings of this study contribute to a deeper understanding of the factors influencing gender attitudes and perceptions in Romania. This research offers important insights for politicians, educators, and advocates working towards gender equality by highlight the essential role of education, the persistent presence of gender stereotypes, and the complex interaction of demographic factors. In the future, sustained efforts are required to undermine deeply rooted gender norms, advance inclusive leadership techniques, and establish environments in which people of all genders can prosper and fairly contribute to society.

5. Conclusion

This research has uncovered important insights into the relationships between educational attainment, views of women's leadership, and attitudes toward gender equality by examining the landscape of gender dynamics inside Romania. Using structural equation modeling (SEM) and data from the Romanian Gender Barometer (2018–2019), this study has shed light on the major variables influencing gender norms. Although steps have been taken towards equality and people recognize stereotypes and want to get rid of them, subconsciously and behaviorally we still behave based on them (Sanaa Taher 2021).

Because of the influence of gender role socialization and occupational segregation, girls who are encouraged to express traditional female traits have lower levels of self-confidence and aspirations for their careers than boys (Powers and Wojtkiewicz 2004, 601–22). The importance of education in promoting progressive gender views cannot be exaggerated. Research indicates that education can have a transformative effect in challenging gender norms and advancing social justice. Higher education levels are associated with a stronger tendency to reject persistent gender stereotypes.

This study also clarifies the widespread impact of gender stereotypes on opinions about women's leadership capacity. The impact of traditional ideas of masculinity on perceptions of women's leadership abilities is significant, showing the need for initiatives designed to eliminate these deeply rooted prejudices. Furthermore, our analysis reveals the link that exists between gender attitudes and demographic characteristics. Perceptions of gender roles and attitudes toward gender equality are significantly influenced by variables including education level, sex, civil status,

and residency. It is critical to address intersectional inequities, because those with traditional gender roles will also influence the feminist agenda. In order to achieve gender equality in Romania and worldwide, persistent initiatives that are driven by evidence-based actions are essential going forward.

6. Limitations

Even though this study provided insightful information, there are a number of limitations that should be taken into account when evaluating the results and planning future research projects. First off, it is difficult to determine causality or detect temporal trends because of the Romanian Gender Barometer's (2018–2019) cross-sectional data. Although SEM offers a strong foundation for examining complex relationships, longitudinal data would reveal more about how gender attitudes and behaviors change over time.

Second, social desirability bias may arise from the use of self-reported measures, as respondents may give answers they believe to be socially acceptable rather than ones that really reflect their views. Using mixed-method techniques and qualitative data to gather complex viewpoints on gender dynamics could be beneficial for future research. Furthermore, the representativeness of the sample and the particular Romanian environment may restrict how broadly the results may be applied. Romanian-specific historical, economical, and cultural elements may have an impact on gender attitudes in ways that this study does not fully represent.

In addition, a more thorough investigation of multiple identities beyond those covered in this study is required due to the complexity of gender attitudes and perceptions. According to intersectionality theory, people are subjected to several intersecting oppressive systems, which can have a distinctive impact on their experiences and attitudes. Finally, even though SEM is an effective tool for unraveling multifaceted relationships, real-world events may be more complex than what model fit indices can fully communicate.

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